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XIV.—*Notes taken on a Journey from Constantinople to Mōsul, in 1839-40.* By WILLIAM AINSWORTH, Esq., in charge of an Expedition to Kurdistan.

[As Mr. Ainsworth's route, as far Kóniyah (Iconium), is that usually followed, those portions only of his Journal which add to our previous knowledge of that country have been here given.—ED.]

MESSRS. AINSWORTH and Rassám, now British vice-consul at Mōsul, embarked in a káik (or wherry) on the 2nd of November, 1839, and at the end of 5 hours reached Hersek, on the southern side of the Gulf of Iznikmíd (Nicomedia). The neck of alluvial mud and sand on which this village stands at the mouth of the Dervend-şú (Barrier-Water)* extends upwards of two miles into the sea. The neighbouring lagoons render the place so unhealthy that none but the attendants at the post-house reside there. It is not far from the site of Pronectus, from which there was anciently a ferry to Libyssa, now probably Harakah, as the neighbouring ruins show. Gekbuzeh (pronounced Geïbizéh), anciently Dacibyza, and Máldisem to the west of it, were supposed by Major Rennell and Colonel Leake to occupy the site of Libyssa. They then travelled along the outskirts of Gók-tágh (Heaven-mountain), the western extremity of Olympus, consisting of sandstone, with a varying dip N. or S. at a moderately inclined angle. The village at the pass, called Dervend (Derbend, *i. e.* Barrier), is chiefly inhabited by Greeks. Early on the third day they came in sight of the beautiful Lake of Izník (Nicaea). The hills by which they descended to its shores are lime and sandstone resting on schist and quartz rock. Izník, of which the double walls are in great part still subsisting, has not now more than 150 houses, one-fifth of which only are inhabited by Greeks. These crumbling walls, and their intersecting towers, oblong, of white marble, and semicircular, of red bricks, covered in most places with luxuriantly climbing shrubs, are extremely picturesque. Two fine gateways and the remains of a Christian church are particularly deserving of notice; but the latter does not appear older than the time of the Lower Empire.

On the 5th of November, after travelling through a valley at the eastern extremity of the lake, and passing a large artificial dam or mound near Karádún, about 5 miles from Izník, they began to ascend hills of the same rock as those last mentioned, and after crossing a ridge, descended through a rocky glen and narrow pass into the valley of the Lefkeh Şú (River of Leuce,†

* Named from Kiz-derbend (Virgin's-barrier) to the S.E.

† Pronounced Lefki by the modern Greeks. Mr. Ainsworth says it is here called Sakáriyeh, and supposes it to be the main stream of that river. It receives the waters of Yeni Shehr and Aïn-göl in this valley, and beyond it, those of Vazír khán and Bileh-jik.

the ancient Gallus), which they crossed by a bridge, and soon reached that town, which has only 400 houses. The low land in this valley, which is peculiarly picturesque, consists of red and brown tertiary limestone; and the hilly tract to the east of Lefkeh is a brown sandstone, with red and white marl dipping north, succeeded by a tract of trachyte; after which comes a range of precipitous limestone rocks, through a deep rent in which the river Sakáriyeh probably forces its way. The town of Khusrev Páshá, or Vezír Khán, at the summit of this beautiful pass, has about 100 Greek and 50 or 60 Mohammedan families; and furnishes annually 4000 ókahs of silk. The valley of the Lefkeh river soon becomes very narrow and less fertile; and the high-road, crossing the stream by a bridge, leads over stony hills of trachyte to a level and slightly cultivated upland. Bilehjik, on a limestone rock, is now visible 3 miles distant on the right. The descent commences at the distance of $2\frac{1}{2}$ hours (about 7 miles), and passes through beds of conglomerate sandstone and marl, with some broken trachyte. The hills to the north, through which the Sakáriyeh and its tributaries pass, appear to be limestone which has suffered from volcanic action. To the south a lower range of trachyte is succeeded by limestone, and well-wooded hills; at the foot of which is Sógut,* a small town, named from the many willows in its neighbourhood, and containing about 400 houses, pretty equally divided between Christians and Muselmáns.

Nov. 7th.—A journey over hill and dale, with much wood, for 3 hours, brought them to a more open tract of micaceous schist, lightly cultivated. In one place some fragments of columns and architecture seemed to mark an ancient site. Beyond this, in crossing an extensive plain, they had a distant view of Eski-shehr, about 7 or 8 miles S. 54° E.

That town, now almost abandoned, consists of two portions, one at the foot of the hills, the other between two rivulets in the plain, where the market is held. There is a khán, and a manufactory of pipe-heads from the magnesian and silicious substances called by the Germans “meerschaum” (“sea-foam or spray,” from its white colour). The pits whence it is obtained are said to be 8 hours distant (24 miles), on the road to Serví Hışár. A specimen, procured by Mr. Ainsworth at this place, fresh from the mines, prove it to be a hydrated silicate of magnesia. It appears to be found in a bed of volcanic rock, similar to that of Garsaura, which crowns the hills S. of Eski-shehr, and rests upon strata of talk-schist and serpentine. This seems to be only a local variety. It is a porous, friable stone, almost entirely composed of small-

* Pronounced Sógyut.—Ed.

grained vitreous or transparent felspar, with here and there crystals of augite or pyroxene. In the most common varieties which are of a light grey colour, when carefully examined with a glass, each separate microscopic grain is observed to be in a state of decomposition on its surface; and, like other decomposing felspars, is passing into a variety of percellanite kao-lin, or pe-tun-tse, as it is indifferently called. In certain varieties of this rock the process of decomposition has proceeded further, and the result is an uniform pulverulent mass, imbibing water with great avidity. The cerous lustre and more close texture of other varieties of the same product, attest the existence of larger proportions of magnesia in their composition, and those varieties alone are sought for on account of their utility. They exist, however, chiefly in combination with more impure and coarser varieties; and hence, at the magazines at Eskí-shehr, there is much cutting and reducing before the choice pieces are polished previous to exportation.

In the hills of Eskí-shehr the meerschäum is associated with breccia and compact brown silicious rocks, which latter is most common in the neighbourhood of basaltic formations, such as are frequent between Eskí-shehr and Seyyid el Ghází. At this latter place are cliffs formed of thin alternate beds of the same white and grey rock, sometimes so friable as to be almost pulverulent, at others more uniform, and at others containing breccia; and lying upon these there are various kinds of silix.

Eskí-shehr, by observations made with the boiling-point thermometer, corrected by Colonel Sykes's Tables, is at an elevation approximatively of 2308 feet above the sea.

9th.—Their road from Eskí-shehr lay over uplands, terminating here and there in moderately high terraces of rock, or stretching out into wide unvaried plains. The hills are covered with low shrubs; the low land, however, has but a scanty vegetation. The sheep of this tract, which is open and exposed, and has an average height of 3000 feet, have clean and light fleeces; and the goats have (as throughout Western Asia) an underdown, although their upper fleece is not so silky as that of the true Angora or Kurdistán breed.

The goats of the central upland of Strabo's Phrygia Epictetos are further remarkable for their short horns, and their various colours, being generally reddish-brown and black, but sometimes black and white, or reddish-brown and white.

After passing round a wooded hill of trap-rock, they crossed a fertile valley, watered by a stream 30 feet wide by 1 foot in depth, and then entered into the town of Seyyid el Ghází, situated in a narrow ravine at the foot of the cliffs which bound the valley to the east. This town contains about 600 houses of Muselmáns, and is much venerated by Mohammedans on account of the saint

who is buried in its sepulchral chapel. A Tekiyeh (convent) and other religious buildings, not quite so ruinous as usual, are picturesquely perched upon the cliffs above the town.

10th.—The ravine Seyyid el Ghâzî enters the hills in a direction of S. 8° E., and passes, as previously noticed, through silicious rock and lava, which on the upland are soon succeeded by a distinct dark-coloured trap-rock, with only a few dwarf oaks and junipers. At a distance of about 6 miles from the same place limestone succeeds to the silici-calcareous rocks, from which spring trees of oak and arbor vitæ (*Thuja*). A small, fertile valley in the midst of this wooded district, contains a village of about 100 houses, called Bârdâk Chilî Kôi,* where remains of ancient buildings, the columns apparently of the age of the Lower Empire, seem to show the vicinity of some ancient town.

A forest of tall pines then crowned the wooded eminences, and led, after about 2 hours, to a large cultivated plain. A wooded hill and more open country brought the travellers, amidst a pouring rain, to the wretched village of Khusrev† Pâshâ; in which, as in Nizib, a large and ancient Christian church has been converted into a mosque.

11th.—Forests similar to those on the other side of Khusrev Pâshâ, growing on soil, the substratum of which, is a blue and white granular limestone, alternating with clay-schist, continue to the S. of that place. A few organic remains and impressions are found in the softer beds of the sedimentary deposits, which here begin gradually to rise into hills from 900 to 1000 feet above the neighbouring valleys. This is an outskirt of Emîr Tâgh which is tame in its outline, but from its abundant wood and verdure, always pleasing and occasionally very beautiful.

About 16 miles beyond Khusrev Pâshâ lavas and tuffa, with beds of obsidian and coloured silex, are first seen. As the decomposition of these substances takes place at different rates, they soon form terraces, beset with caverns, natural or artificial, which have been used as chapels, hermitages, or habitations.

The first have ornamented portals, and were evidently sepulchres: near the ruins of an ancient village further on, there are many large caves, which served as habitations or oratories; and near the commencement of the district of Bayád,‡ a rocky hill by a spring, is full of them.

That district is a high upland in Emîr Tâgh, rather exposed, but having some good arable land. Beyond it, low hills of schist and quartz, succeeded by limestone, form the southern de-

* Pitcher-freckle-village; or, if Chilî, Partridge-village.—Ed.

† Khusrev, pronounced Khusref, is the Khosrau (Chosroes) of the Persians.—Ed.

‡ Biyât in the *Itinéraire de Constantinople à la Mecque*, p. 91.—Ed.

clivity of Emír Tāgh, which descends to Búlávádín by a long and very gentle slope.

This small town contains 3000 inhabitants, exclusively Muselmáns. Its houses are only of one story; and there are five mosques, some kháns, and a market-place. A solitary minaret at some distance from the town marks, no doubt, the site of a ruined mosque.

The great plain in which Búlávádín stands is bounded by Sultán Tāgh on the S., and by Emír Tāgh on the N., and has several lakes. Its elevation, as ascertained by the boiling-point thermometer, is 2900 feet above the sea, and it lies between ridges dividing the waters flowing towards the Black Sea from those which flow towards the Mediterranean. In that peculiarity, it resembles the plains of Kóch-Hişár, I'ghún Sû, Kóniyah, and Nigdeh, in each of which there are similar lakes.

12th.—About $2\frac{1}{2}$ miles S. of Búlávádín the plain becomes marshy, and is at times difficultly passable. There is a central water-course, nearly stagnant, which at some seasons flows slowly in an easterly and north-easterly direction to the permanent lake, which occupies the lower part of the plain, and which varies much in size at different seasons. The road is carried across this marsh on a raised causeway for more than 5 miles. In the marsh there is an abundance of birds, such as starlings, plovers, snipes, quails, ducks, geese and bustards, vultures, blue kites, merlin-hawks and buzzards.

At about 9 miles from Búlávádín is the foot of Sultán Tāgh, where the ground begins to rise; and the villages of Sinák Dereh, and Sinák Yaká, stand at the entrance of two ravines in the hills.

Sultán Tāgh, although not very lofty, is remarkable for its bold, Alpine character, and massive, rocky outline. Its general elevation appears to be from 1000 to 1500 feet above the level of the plain, and perhaps 4000 feet above the sea. Its culminating point above Aḡ-Shehr was, even at this season, only tipped with snow. From an examination of the pebbles brought down in the bed of its winter-torrents, it appears to consist chiefly of limestone, lying on argillaceous and micaceous schists. This chain is not so extensive as it appears on our maps. The lakes in this tract, generally said to be salt, are, from all we could learn, fresh, and abound in fish; nor is there any substance in the neighbouring soil at all resembling the saliferous sand and sandstone which nearly surround the Lake of Kóch-Hişár.

13th.—From Isháklí, a large village, surrounded by gardens, they proceeded to Aḡ-shehr, about 12 miles distant. The country at the foot of Sultán Tāgh is here well cultivated, and often very pleasing. The cultivation extends for a mile or two in the plain; but beyond that northwards, all is marsh or water.

Ak-shehr is situated at the entrance of a large valley watered by a small river. Its houses rise above one another in terraces, or are prettily scattered amid groves and gardens. There are fifty Armenian families. From Ak-shehr, an extensive, grassy plain stretching far away in an easterly direction, is bounded by a few ranges of low hills.

14th.—At $3\frac{1}{2}$ miles, nearly S. by E. from Ak-shehr, they passed Karyat, a village on a hill, and entered a plain bare of trees, but yielding a little corn. This plain, occasionally varied by a village, rivulet or some rubly limestone, extends to Arkad Khán of the maps.

Beyond that place, the road leads over low hills of limestone (apparently of the chalk formation) to the valley of I'ghún,* remarkable for its two lakes and stream running between them; respecting the junction of which Mr. Ainsworth had not an opportunity of satisfying himself. At the entrance of this small town there are some sacred buildings of the Mohammedans, and a rivulet which flows northwards to a lake, and has two villages at its further extremity.

15th.—A tract nearly similar to that just described, leads through Khánúm Khán (the lady's khán) to Ládik, or Jórgán Ládik,† a village situated on a mound of ruins. Numerous fragments of Byzantine architecture, as well as its present name, make it not improbable that this is the site of Laodicea Combusta, placed by some ancient writers in Lycaonia, by others in Pisidia or Phrygia, which serves, at all events, as Cellarius remarks, to assist in determining the part of Lycaonia in which it is to be sought.

16th.—The valley of Ládik, which is in a kind of recess, is bounded on the south-east by a hilly district, composed of brown and blue argillaceous schist, passing into common mica-schist, with veins of quartz, lying under is limestone. A remarkable rock on the top of the hills to the right is called Kiz Kayá-sí (maiden's rock); and 2 miles on the road are the ruins of what was evidently an old Greek village; beyond which, an unproductive valley opens upon the great plain of Kóniyah. Not far from Kóniyah, there is a Greek village and monastery of some antiquity on Mount Siliyá.

19th.—Kóniyah, as one of the great cities of Asia Minor, has been much visited by European travellers, who have each, from the days of Niebuhr to those of Colonel Leake and Mr. W. J. Hamilton, contributed their remarks upon its past and present condition. It appears that the first of these travellers made a

* Or I'ghún, Itin. de Constant. à la Mecque, p. 93.—Ed.

† Yúrukán Ládik, *i. e.*, Wandering (Turkománs) or Láziķiyeh Karamán, *i. e.* Karmanian Laodicea.—Ed.

sketch of the town, which will no doubt embrace its greatest peculiarity, the distribution of its walls.

After visiting many of the great towns of Asia Minor, Angora, Káiseriyah, Kástamúni, &c., Kóniyah certainly appears the most fallen and ruinous of all, and yet it stands among the first, in its early renown for size, population, and riches. Strabo particularly alludes to its being well built, πολίχμιον εὖ συνωκισμένον. Pliny says, "urbs celeberrima Iconium." In the Acts of the Apostles (ch. xiv. v. 1.) we find it noticed as frequented by a great multitude of Jews and Greeks. In the ecclesiastical notices, according to Cellarius, it is also placed first upon the list as a metropolis. Hierocles also, "Iconium metropolis."

Independently of other circumstances, numerous monuments of various kinds, principally in the Saracenic style of architecture, fully attest that under the Mohammedans, this city has always been one of great celebrity and sanctity, as well as a seat of learning. There are at present the remains of upwards of twenty medresehs or colleges, a number nearly equal to that of Baghdád, the city of the khalifs themselves.

There are still several handsome Mesjids or Jámi's in Kóniyah. The Sheríf Altún Jámi' is the largest; next comes that of Sultán 'Aláu-d-dín, our Aladdin; and then the Jámi' of Sultán Selím, whose building exploits would have delighted the heart of a Procopius.

Many of the sepulchral chapels are also of great sanctity. In the journal of the sixth campaign of Suleimán (1534) we find the Sultán halting at Kóniyah to visit the tomb of Mevláná Jelálu-d-din.* Several that now remain are objects of veneration, and even of pilgrimage; but generally speaking, they and the colleges are crumbling into ruins.

'Alí Páshá, then in command there, had about 6000 regular troops at his disposal, of which about 500 were in Nígdeh, and 100 in Sárandah. The militia of the Páshálik had been disbanded since the reverses at Nizib; and the guns attached to that service were sent to Constantinople. A sort of quarantine, limited to the fumigation of persons, had been established at the entrance of the city.†

Nov. 22nd, 1840.—This day, says Mr. Ainsworth, we quitted Kóniyah, travelling over its wide and level plain in a direction S. 50 E. On this plain, the beautiful bird called the Aleppo plover (Lesson, *Man. d'Ornithologie*) first makes its appearance. It

* Rúmí, author of the *Meşnaví*, a much-admired ethical poem in Persian, and head of the Mevleví order of Dervishes or Fakirs.—Ed.

† The remainder of this paper is extracted from Mr. Ainsworth's Report.—Ed.

soon almost entirely supersedes the common plover, pewit, or lapwing; and is met with as far as Persia.

The soil of the plain became soon very saline, and communicated its peculiar character to the vegetation. It afforded us much amusement to observe the sudden impulse with which the camels rushed towards the now frequent tufts of *Mesembryanthemum* and *Salicornia*, reminding them of plains with which they were probably more familiar than with those of Asia Minor. After travelling about five hours, we came to a marsh, where the road was covered with small frogs, as if they had been showered down from the sky, but in reality they had only issued from the waters; and various birds of prey were enjoying an abundant repast.

In another hour we arrived at Khákhun, a village of herdsmen, situated in the midst of the marsh, and there we reposed for the night.

23rd.—We started at an early hour, in the midst of a dense mist, which only allowed us to distinguish that we were travelling through the same marshy ground. About 7 miles from Khákhun we came to Ismíl, a large village just without the marsh, and built upon a dry gravelly plain, not far from the extreme W. of the Karájah Tágh.

At about 7 miles further from Ismíl the weather cleared up, and we found by back bearing, the hill of Siliyá above Kóniyah N. 88 W., the culminating point of Karájah Tágh N. 86 E., and Hasan Tágh N. 66 E.

About 4 miles beyond this, the ground began to rise a little; and, passing a slightly elevated tract of coarse limestone, we entered upon a grassy plain affording pasture to numerous flocks. 6 miles further on we passed over some higher ground formed of coarse limestone, then descending a rocky terrace about 20 ft. in height, entered upon a cultivated plain continuous with that of Sultán Khán and Kóch-Hişár (Hasan Tágh bearing N. 56 E. about 15 miles), which as far as Kará Buñár (Black Spring), at the foot of Karájah Tágh is only about 2 miles in width. I am not aware whether Mr. W. J. Hamilton has corrected the geography of this part of the country; but in most maps, as, for example, that published by the Society for the Diffusion of Useful Knowledge, Hasan Tágh is placed nearly a degree in latitude to the N. of Karábuñár. Karájah Tágh is continued northward to Hasan Tágh by low hills which border the plain previously noticed, and to the identity of which, with that of the lake of Kóch-Hişár, I can bear sufficient testimony, as I took the bearings of many known points, more particularly the remarkable volcanic hills near I'n Aví and the Murád Sú Gól.

The same chain of hills (incorrectly marked in the maps as the

Bulghâr Tâgh) is connected also to the E. with Hasan Tâgh by low hills and volcanic cones dispersed over a rocky district. The road from Ereglí to the Gólek Bógház, it is important to remark, is not carried through Taurus (Bulghâr Tâgh) as on the maps, in a direction S. of E., but for 4 hours at first to the magnetic N. 50 to 60 E., having all that time the plain of Bór or Tyana to the left, and between the traveller and the foot of Hasan Tâgh and its more southerly cones. I was the more anxious to form a correct idea of the more southern extension of Hasan Tâgh, as upon that depends in a great measure whether or not the road given in the Theodosian Tables, after passing by Congustos (Túsun Uyuğ) and Petra or Perta (Uyuğ Boyád), and crossing Strabo's route from Ephesus to Tomisa, at a point where Mr. Hamilton fixes Nazianzus, and where we found Gelvedeng and other ruins, passed over the mountains to Tyana, or continued along the plain from Uyuğ Boyád towards Karâ Buñár. I am now satisfied that Mr. Hamilton and ourselves visited the spot where these three ancient roads met; for Karâ Buñár is quite out of the way from Petra to Tyana, whither the Theodosian road is carried: and Mr. Hamilton has described the route in the Antonine Itinerary as it is extended from Andabilis to Nazianzus and Archelaïs Colonia (Ak Serâi).

The facts here detailed are also of importance towards ascertaining the reason why Cyrus and Alexander should pitch their tents at Kilisâ Hışár, in the neighbourhood of Bór, which appears so far N. of Ereglí, and has been shown so satisfactorily by Mr. Hamilton to be the ancient Tyana. The knowledge of the direction of the road from Ereglí at once shows that, except from the position of the Turkish posts, the traveller would have no need to go to Ereglí in his road across Mount Taurus, the passage through which is to the N. of that town, and is, moreover, inaccessible to an army for a large part of the year; and at other times, hardly to be approached, on account of the extensive and almost impassable morasses, occasioned by the drainage into that basin which forms the ancient Tyanitis, the peculiar features of which are now well known.

The town of Karâ Buñár is inhabited chiefly by Turkománs, who feed their flocks in the plain in winter, but emigrate in summer towards various points of the great plain of Sultán Khán. Its houses are almost all of one story, rather from fashion than deficiency of means; for many are well furnished, according to the taste of the country. Sultán Selím built a handsome jâmi' here, but it is falling into ruins; attached to it, there is also a large well-built khán covered with lead, the greater part of which has long since been converted into bullets. There are several salt-petre works at this place.

Extending southwards from *Ḳarājah Ṭāgh*, and closing the Plain of *Ḳarā Buñār*, there are, first, a rocky cone with naked stones like ruins, then a pair of twin conical summits of volcanic cinders; and further on, a higher cone of similar character, with a truncated summit—a feature which here belongs to all the hills of volcanic cinders, whether black or white (augitic or feldspathic); and whether in the crater of volcanos, or on their sides: this peculiarity has also been observed by Mr. Hamilton. Beyond these truncated cones a rocky range of low hills sweeps round to the W. as far as a group 3 miles to the S.; and extends thence in low rocky hills to a conical mound, on which there are the ruins of two towers, overhanging the town of *Ḳarā Buñār*; to the S. of which, there is a steril, stony district.

24th.—About 3 miles from *Buñār*, in a direction to the S. 55 to 60 E., after ascending these hills of volcanic rock, there occurs a remarkably distinct crater, with a heap of cinders in its centre, forming a truncated cone. The lips of the crater, which is about 60 feet in depth, are for the most part formed of solid black basanitic lava; but white and yellowish-white tephrites, besides other mineral substances, are found in it. The cone in the centre appears to be entirely formed of black cinders (augitic), and is about 100 feet in height. The bottom of the channel, left between the outer walls and the central cone, is for the most part filled with water, and in places afforded a fine crop of grass for the horses and cattle which were quietly feeding there. A little beyond this, we came into a long narrow plain, stretching S. 76 E. along the foot of *Ḳarājah Ṭāgh*, passing other conical mounds of black cinders till we came to the last slope of the hills over the valley or plain of *Tyanitis*, *Ereglí* bearing S. 68 E. at a distance of 12 miles or upwards.

In the midst of the marshy plain over which we had now to travel, and where the central channel “drags its slow current lazily along,” is the village of *Hárhán*, inhabited by herdsmen. There are two roads to this place, one used in winter very circuitous, the other in summer, by which we were still enabled to pass; but great part of it was already under water. Hence we had alternately marsh and dry ground as far as *Ereglí*, situated at the foot of the western extremity of the hills which gradually rise from thence till they are lost in the snow-clad summits of *Bulghár Ṭāgh*. It is a poor place, containing 800 houses of Mohammedans and 50 of Armenians, and has a small market. Notwithstanding its position, it was not garrisoned. Being embosomed in trees, to the traveller coming from the *Gölek Bógház*, *Ereglí* has a pleasant and inviting appearance, nor are its inhabitants inhospitable.

25th.—We started in a direction of N. 50° E., and passed two

rivulets flowing to the N.W. Our road lay along the low hills which border the plain to the E., and are composed of red sandstone in bluish cream-coloured beds, conglomerated limestone, and gypsum. To our right we had the lofty chain; for the proper name of which I had already inquired of several persons, who all called it Bulghár Tâgh. As I thought, however, the name might vary in different places, I again inquired, when resting at its foot, and also in the villages on the Cilician side, when the name was uniformly given, so that I feel convinced every future traveller on this road will find it universally in use. Ramadán-O'ghlú, &c., and the other names given in our maps, are probably derived from Turkomán tribes inhabiting its lower ranges at the eastern or Cilician foot of the chain.

However it may be with regard to the plain of Nigdeh at present, it is certain that with regard to the Gólek Bógház* no correct idea has yet been given to the world; and the peculiarity of its hydrographical features are not pointed out in any work that I have seen. Its peculiar characteristic is, that the source of the Savus or Seihún is in the low hills on the western side of the chain, and that the Pass, after following the course of these waters for some distance, turns *up* the valley of a tributary stream, at the summit of which, and at an elevation of 3812 feet, are the fortified posts of Mohammed 'Alí Páshá; immediately beyond which, the waters again run to the E. and S. of E., rushing through a tremendous gap in the mountains, and thence flow directly towards the Cydnus or river of Tarsus. I shall describe this pass more in detail hereafter; but have now ventured to record, in the fewest words possible, its leading features, that they may be better understood; for travellers have hitherto uniformly regarded the stream that passes through the above-mentioned gap as the great river of the mountain-pass which Col. Chesney and the writer of this paper crossed in a journey through the Bádinján O'ghlú district, and found it to be a tributary to the Seihún.

At a distance of 12 miles from Ereglí we came to a small village called Kayán, with a rivulet flowing N.W. Our route now turned to S. 60° E., as if bent upon carrying us into the heart of the hills. We ascended a short distance among low hills of red sandstone and sand; then up a hill of conglomerate and limestone: beyond which was a cultivated field. At this

* The description of the Gólek Bógház, or Pass, through the Bulghár Tâgh, is not included in my Memoir upon the Cilician passes, as I had at that time only been partly through it. It is therefore well to notice here that they are geneally called by the ancients the Cilician gates,—Strabo (lib. xii. p. 370), Arrian (lib. ii.), Cellarius (lib. iii. cap. viii), but neither Arrian nor Quintus Curtius (lib. iii. cap. iv.); nor, I believe, any of the historians of Alexander's campaigns confound these gates with the Amanian, which "were near the sea." Cicero (lib. v. ad Attic. epist. xx.) calls them the gates of Taurus, leading from Cappadocia into Cilicia.

point, the few drops of water first collected began to flow to the N.E. This was about 4 miles from Káyán and 3 from Kolú Kúshlá; and immediately beyond its source the rivulet flows through a little pass in basanitic rocks, and continues along the valley in a direction of N. 70° E. till it opens upon the cultivated plain of Kolú Kúshlá, where it is joined by other small streams, which united, flow down along valley and pass on stretching to the S. 80° E. The hills now begin to attain a somewhat greater altitude. Those on the S. side of the valley are composed chiefly of gypsum; those to the N., which are more lofty and rugged, are composed of trap-rock, more especially basanite, spilite, wacke, and tuffa. Kolú Kúshlá is a cleanly aggregation of Turkomán houses, with a large khán and a post station.

26th.—This day's journey carried us to the foot of the central chain of the Bulghár Tágh. And it appears, from an examination of the rocks and fossil organic remains, the details of which would be out of place in these notes, that the western, like the eastern declivities of Taurus and its outlying chains, are composed principally of tertiary deposits. The succession of these rocks on the eastern side has been described in my "Researches, &c." And it may be remarked that the main difference between the two aspects of the same chain are, that on the western side the variety of formations is by no means so great as on the eastern, while the frequent and extensive disruption of igneous rocks amid the formations on the W. side has given rise to an infinite variety of altered rocks too numerous to be here specified; and has, at the same time, rendered the existence of organic remains much more rare, and the age of the formations more difficult to determine. It is necessary also to remark, for the use of future travellers, that the road we followed upon this occasion, direct from the pass to Adanah, presents neither the great variety of formations, nor the vast number of gigantic fossils, which I met with on my former journey from Tarsus to the lead-mines in the valley S. of the Gólek Bógház. Near the Roman arch, on the road to Tarsus, the tertiary limestones are associated with mica schists; and in the great chain of Bulghár, cretaceous rocks, converted into a non-fossiliferous, hard, and granular rock, are piled up in precipices of fearful height and grandeur upon the same mica schists; but I have not detected in any part of the chain sedimentary formations which could be said to be inferior to the chalk.

The waters of the valley of Kolú Kúshlá sweep gradually round from N. 85° E. to S. 40° E. Farther on, the valley widens and contains one or two small villages at the foot of the hills; and gardens with vineyards and groves of walnut-trees ornament the rivulet's banks. About $3\frac{1}{2}$ miles the lateral valley of Kolú Kúshlá terminates in a more extensive valley, nearly parallel to

the central chain, and containing a large rivulet, which flows from the S.W. This valley is bounded to the E. by a rocky range of hills clothed with wood, composed of limestone, sandstone and altered rocks reposing upon rocks of igneous origin. And between this chain and the loftier summits of Bulghár is the valley of Aluguga, also with its tributary rivulet.

The general direction of Bulghár Tágh, from a variety of bearings, may be said to be from E.N.E. to W.S.W. The direction of 'Alí Tágh, the great snowy range N. of this, I believe to be different; and probably, in consequence of a different structure; the determination of this point remains for future travellers, when the prolongation of Taurus to the Dúrdún Tágh, and by Ak Tágh to the sources of the Tigris, will be completed. The line most wanted in the geography of this part of the country, after the determination of the sources of the Seihún on our previous journey, would extend from Nígdeh to Mar'ash, by which the composition and configuration of 'Alí Tágh would probably be determined, and the various tributaries to the Seihún and Jeihún satisfactorily delineated. So well convinced have I long been of the value of such a determination, and of a description of the interesting country around Farráshah, that, had I on this occasion been travelling for geographic purposes solely, and not making a winter-journey to Móşul, scarcely anything would have prevented me from exploring those tracts. Col. Chesney's route to Síş, and Lieut. Murphy's bearings at Anazarba ('Ain Zerbah), will however do something. I heard that M. Fischer, of the Prussian corps in the service of the Sultán, who superintended the construction of the Turkish outworks in the Gólek Bógház, had collected many materials for improving the geography of the Taurus; and that the Barons Moltke and Wincke, who laboured hard in the same cause, returned after the battle of Nizib by Bóstán to Malátíyah, a very desirable line.

After entering the valley of the main tributary to the Seihún, at a distance of 6 miles, the road leaves the valley of the river, for a short time crossing over hills of altered rocks, with a ravine through which it would be very difficult to convey heavy guns. From these eminences the road passes almost directly along a gentle slope, to a point where the first-mentioned stream coming from the left is joined by another large rivulet flowing from the right, and coming from the valley of Aluguga before noticed; these two rivers united flow through a somewhat narrow pass, and this point has been made the seat of the Turkish outworks to protect the Gólek Bógház. The peninsula between the two rivers commands the centre of the valley, and is occupied by a battery, which at the time of our visit consisted of four guns and two mortars. The valley below the junction of the two streams

is crossed by a palisade which stretches up the hill, upon the declivities of which, to the left, are two small batteries at different heights, and on the right side similar entrenchments exist, one at the foot of the hill, the other on the declivities. This spot is called Chiftlik-khán, and there is also a bridge besides the Kerván-seráï. It is now defended by a few gunners and Arnáuťs, whose chief business appears to be to stop the deserters who continually pass through the defile. As there was no resting-place here, nor onwards for some distance, we turned up the valley of Aluguga, by a bad road. About $2\frac{1}{2}$ miles up the valley, we came to the Kishlá* (winter-quarters), which we were disappointed at finding yet untenanted, so we had to proceed about the same distance further, when we found the villagers occupying two separate spots. About 3 miles further up, a mine of argenteriferous galena is worked upon a small scale. The valley, which pursues a direction of from 60° S. to 70° W., to from 60° N. to 70° E., is generally narrow, but contains numerous vineyards and many plantations of walnuts and cherries; the latter, which are of three different kinds, are much sought for both at Kóniyah and at Adanah. There were many picturesque points of view in this wooded and rocky valley, above which the central chain of Bulghár towers along its whole length almost perpendicularly to a height of upwards of 1000 feet above the spectator. In this central chain we only observed limestone resting on talc and mica schists, but in the outlying chain were a great variety of altered rocks, among which, besides a variety of spilites or amygdaloidal formations, was a remarkably bright red rock, which also abounds in other parts of the passes, sometimes with a large conchoidal fracture and even texture like a clinkstone or phonolite, but more generally rudely compact, with a splintery fracture like a jasper or thermantide. Besides, there were talc and mica schists as at the Yailá of Aluguga, diallage rocks, bluish steatitic schists, and schorlitic steatites.

27th.—Having regained the junction of the streams at Chiftlik-khán, our route lay down the valley S. 82° E. A little beyond the khán we found a rivulet, the waters of which were warm, but I had not a thermometer at hand to ascertain their temperature. About 5 miles down the valley there is another palisade carried across a narrow portion of the pass, and a battery is placed upon the heights above. This part of the pass is well wooded: $1\frac{1}{2}$ mile further on, the road is hewn out of hard rocks of saccharoidal limestone, and on turning the corner we passed the first Turkish outwork, consisting merely of a wall carried in part across the valley, with an adjacent guard-house. There are a few soldiers at both the stations last mentioned.

* Here pronounced Kishlá.

Immediately beyond the Turkish outwork is a bridge lately built by Mohámméd 'Alí, and named from a spring close to it, called Shakar buñár, "Sugar spring," clear or fresh water being always designated as "sweet" by the Orientals: hence the "sweet waters" of Constantinople, a muddy rivulet flowing into the "golden horn."*

The valley opens a little beyond this, and here are the first guard-houses of the Egyptians; and 10 min. beyond them the road permanently leaves the valley of the Seihún, which flows on in a south-easterly direction, while the road is carried over hills of diallage rock, first S. 30° W., and then S. 10° W., down to the banks of a large rivulet flowing from the S.W. At the point where the road leaves the tributary of the Seihún, Ibráhím Páshá had established a quarantine of 10 days, which happily for us had lately been done away with. It is certainly remarkable that quarantine regulations should have become so prevalent in the East, where each Páshá establishes them in his territory: thus Háfız Páshá had them between Malátiyah and Sívás; the Páshá of Kútáhiyeh on entering his government; Hájí 'Alí on entering his capital; and Ibráhím Páshá suggested the more vexatious annoyances at Gólek Bógház and Beirút; while Iskanderún, the Orontes, and Latákiyah were left open.

Travelling up the new valley we had now entered, we reached its crest after a journey of 2 hours and upwards, and there found the village and market which the Páshá has established for the benefit of the soldiers stationed at these important posts; but we were detained there a day waiting for horses. The post, according to the Turkish system, having been done away with in the Páshá's territory as well as the tátárs (couriers), a few horses alone are kept along the great lines of communication for carrying despatches solely, which is done by successive Súrujís at each stage; while for the traveller's convenience the horses are sent for, as occurred in the present case, from surrounding villages, some of which were many hours distant. The price is also augmented from 1 piastre per hour in the Sulţán's territory to 2 piastres per hour, besides the inconvenience of a constant delay.

The outworks established in these passes by Mohámméd 'Alí are much more important than is generally imagined, and instead of being mere lines of fortification, from which to advance upon a hostile country, their lasting and durable character, and the care, skill and expense bestowed on their construction, show that they are considered as a permanent line of frontier by those who ordered their erection. They are quite different from anything observable

* The "sweet waters" is merely a literal translation of the "eaux douces" or "aque dolci" of the Franks, established at Constantinople; the spring having no such name among the Turks.—ED.

in the Sultán's territory, even at Várnah or Silistria, and calculated to oppose an enemy more skilled in war than the Turks, being in point of execution quite equal to what is commonly met with in the North of France.

The plain, if it may be so called, which occupies the level summit between the waters of the Seihún and the river of Tarsus, is about an English mile in width, and faces the magnetic point of N. 30° E., the approach to it being, as before said, up hill and through a broken and woody country. Throughout its width it is defended by eight different batteries of stone, each surrounded by a foss, and approached by a drawbridge with double gates instead of portcullis, leading into stone magazines of admirable construction, and in every point bomb-proof: some of these are connected, and the intervening foss is then casemated. To each battery a signal-staff is attached. The system adopted in their construction is that which I have always heard military men mention as now most approved of; that is to say, the rampart does not rise much above the soil, the greater part being sunk, and the ditches here have been dug in solid rock, which would render the cutting approaches a difficult and tedious undertaking. All the batteries command the same front, and are so placed as to intersect one another and not leave a sheltered spot, so that each battery must be silenced or taken in detail before the pass could be said to be gained. On the heights above to the E. there are also additional and extensive lines, beyond which, up to the summit of the mountain, there are towers of observation, and at the western extremity there is also a stone fort with barracks.

A ravine or low uncovered way in the centre of the plain leads to the place where the soldiers are in security, and where the Páshá has built himself a commodious house. Blacksmiths, carpenters and builders are also kept here upon a large scale, both for repairs and also to carry on the works, which are not yet completed. There are upwards of 100 guns distributed in the batteries. The amount of gunners and soldiers stationed here at present, and chiefly living in log-huts, is not however nearly sufficient for the defence of these extensive lines.

By observation with the boiling-point thermometer, the elevation of this culminating level was found to be about 3812 feet: we had sharp frosts both the nights that we spent here, and congratulated ourselves that no snow had yet fallen.

29th.—Our road now descended rapidly, with the tributaries of the river of Tarsus, into a pass in the direction of S. 20° W. A short way downwards we found a small battery; but it appears to be abandoned and does not come within the scope of the existing fortifications. Immediately beyond this is the most formidable part of the Gólek Bógház, where an ancient but illegible in-

scription has fallen, with the rock upon which it was cut, with its face downwards into the stream, and traces of ancient chisel-work attest the labour and trouble spent by former conquerors in opening a way through a narrow gorge, amidst lofty limestone precipices, which one would think a handful of men could convert into another Thermopylæ.

Below this pass vegetation becomes very luxuriant, and many changes in its character afford abundant evidence of a change in climate on the Cilician side of Taurus. The forests consist almost exclusively of pines of fine growth, but not so large as in the Ilik T'ágh. Plane-trees grow by the water's edge, while the bottom of the valley is filled with a dense covering of evergreen oak, bay, laurel, quince, wild fig, wild vine and cedar. At the present moment the pink cyclamen and blue crocuses are in flower, but the myrtle and arbor Judæ (*Cercis siliquastrum*) do not appear till a little lower down, where the wild olive and jujube* (*Rhamnus jujuba*) become common, and the banks of rivulets are clothed with the bright red oleander.

On the right-hand or S. side of this pass are two bold rocky summits of limestone, towering, bare and precipitous, over the surrounding forest: the most western of these bears the ruins of a castle, with crumbling walls and round towers, said to be Genoese: immediately below this, and prettily embosomed among trees on the mountain side, is the village of Gólek, while in the valley beyond and further southward, is the village attached to Mohámmad 'Alí's mines.

At a distance of 5 miles from the rocky gap we came to a khán where I had slept on a former occasion, and here the road divides itself into two branches; the one follows the course of the valley and its streams, and leads to Tarsus; the other turns over the hill-side in a direction of S. 25° E., and leads directly to Adanah. We followed the latter route, as I had been to Tarsus on a previous occasion; but I would recommend future travellers to go by Tarsus, as they will then get good quarters for the night, while on the Adanah road they have to go out of the way to find a village, and there is not above 2 hours' difference in the length of the roads.

Passing by a ruinous khán, near which is a large deposit of travertine from a rivulet which appears to be remarkably loaded with lime, we turned round the hill's side along a wood and by tombs, due E. to S. 80° E., till we entered a glen of limestone, 4 miles from the khán; and 2½ miles down the glen, which opens in a south-easterly direction, is a khán with one or two adjacent

* "Locust-tree," says Mr. Ainsworth—evidently by an oversight; as that tree is the *Ceratonía silíqua* or charob: in America *Gleditschia triacanthos*, *Robinia pseud-acacia*, are called "locust-tree."—ED.

houses delightfully situated amidst abundant waters, surrounded by trees and sheltered by an overhanging cliff.

The road lay hence over the hill's side, leaving the glen and soon entering upon a hilly country of tertiary rocks; $1\frac{1}{2}$ mile from the last-mentioned khán there is a ruined castle or square beacon resembling in structure many of the more simple old Irish castles. There is another of a similar character upon a wooded and conical hill, 1 mile to the right. At this distance it appears like a round tower, but as we arrived early at our village, I had an opportunity of visiting it. Passing hence over some zoophytic limestone, and crossing a rivulet hid among oleanders, we came to a low country of rhomboidal sandstone, and turning off to the S. for about $1\frac{1}{2}$ mile, came to the same village where Colonel Chesney and a small party rested on a former occasion, and from whence the Colonel and myself, having gone out the ensuing morning to shoot partridges, lost the remainder of the party, and were obliged to find our way through the country of Bádinján O'ghlú to Sís, a journey which occupied us three days. This Bádinján O'ghlú is a Turkomán of great consideration, from the extent of his possessions and the number of his followers, in the fertile country of Cilicia. He is now, and has been for many years, the civil governor of Adanah, which is, however, always the residence of one or more of Mohammed 'Alí's generals.

The village at which we had now arrived, and the name of which, by some unfortunate quarrelling with the inhabitants, I failed to obtain, commands a very extensive and truly magnificent prospect. The greater part of Cilicia Campestris, with the towns of Tarsus and Adanah, are stretched at the foot of the hills, and the horizon is only bounded in the same direction by the shores of the Mediterranean; while Dúrdún Tágh, Amanus, and in front Jebel El-Núr, form the background to the E. It may be worth while to record one or two distant bearings from this point. Jebel Akra' (Mount Casius), S. 21° E.; Rás-el-Khanzír (Boar's Head), S. 27° E.; Bèilán-defile, S. 47° E.; N. rock of Jebel El-Núr (see Beaufort's Karamania), S. 68° E.; N. end of Amanus (Darius' pass), S. 82° E.

30th.—We soon regained the great road to Adanah, which led along a valley from S. 15° to S. 20° E., and about 9 miles from the village came to another square ruinous castle, which, like the other two, evidently belonged to some European possessors of the rich and fertile plain of Adanah and Tarsus. We finally entered upon this plain at a short distance beyond the ruin; and as we are now leaving the Gólek Bógház, I may be allowed to remark, independently of its interesting geographical features previously noticed, that it would also be impossible for any traveller to ride through the whole length of this pass without being much struck

with its varied beauties; I can now compare it with four other long and tedious passes through Taurus, one of which is associated in my mind with only painful recollections, and although not so difficult, and perhaps surpassed in one single point by the Dúrdún Tágħ—where the road carried over the hill suddenly comes upon the Pyramus, rolling along a deep and dark chasm many hundred feet below, sharp precipices on all sides, and the shining peak of Dúrdún towering up to the skies above, with no visible road left for the astonished traveller;—rivalled also perhaps in the pass of Ak Tágħ by the beautiful valley of Erkenek;—still the Gólek Bógház contains by far the most numerous and varied points of bold and massive mountain scenery of any of the other passes. The superior height of the mountains, and the gigantic scale of the scenery of the Alps, does not allow of their being fairly compared with the chain of Taurus, in every respect inferior to them; but the able illustrator of the former (Mr. Brockedon) would also find much that would be highly worthy of his pencil in the Gólek Bógház. The differences of elevation between the two will no doubt be hereafter ascertained, but it will be more difficult to decide upon their peculiar claims to distinction. There are in the Gólek pass open spaces like the Vallais, but in the Vallais, on each side, are long continuous mountain ranges, which ultimately (especially to a pedestrian) become monotonous, while in the Gólek, mountain succeeds to mountain to the right and left, and vast semicircular precipices support broken glaciers piled one upon another in such profuse confusion and inimitable grandeur, that it is impossible to tear oneself from a scene which, wherever one turns, presents a new wonder. In its more rocky, craggy scenery, the Gólek is, as far as I have seen, quite unrivalled: such a succession of fallen masses, rocky projections and steep cliffs, will not admit of description; nor would they be represented by the Trosacles ten times magnified. I need not mention the vegetation or the habitations of men, as adding to the peculiarities of these scenes; but one thing is deserving of notice—the lammer-geyer or condor of the Alps is rarely seen by the traveller, except at heights at which its size and strength can only be conjectured; but the great bare-necked vulture, which represents in Taurus the condor of the Andes, and the lammer-geyer of the Alps, and is a larger bird than the latter, may be sometimes seen in dozens together, waiting till some surly shepherds' dogs have had their fill of a newly-killed animal, and they are never wanting amidst their favourite crags.

The features of the plain of Adanah are very uniform: here and there is an occasional tree, most generally the locust-tree (*Caratonia siliqua*), a peculiarity in which it differs from almost every other plain in Asia Minor or Syria. The thorny acacia,

the caper (*Capparis spinosa*), and two species of robinia, are its only shrubs; its flowering plants and grasses are numerous. Its more remarkable tenants are gazelles, foxes, hares, jerboas, ground squirrels, and large and small bustards. It is celebrated for its cultivation of cotton, and now produces much sugar-cane. There are also many date-trees, a further proof of the warmth of its climate.

The learned President of the Royal Geographical Society, in his Anniversary Address for 1838, has very truly remarked of the Cilician, Amanian, and Syrian passes, that they included "a line of march which, from its being so frequently mentioned by historians as that which was preferred to all others in the communication between the eastern and western parts of the continent, must have possessed advantages in a military and commercial point of view which have not yet been sufficiently developed, but resulting as well from the nature of the countries to be traversed as from the facility of commanding supplies for the support of armies." Without proposing to myself to unfold even the majority of these peculiarities, I may perhaps be allowed to point out what appeared to me as leading features in the case. The first of these is that, from the sea-shore to the northern termination of 'Alī Tāgh, except some foot-paths and an occasional bridle-road, there are very few feasible passes through Taurus. The first of these—the maritime pass—to the W. of Sōlah, afterwards Pompeiopolis, has been put into a state of defence by Ibrāhīm Pāshā, but I understand that it is difficult of access. There are other foot and summer roads between this and Ereglī, from which latter place is a summer bridle-road across Bulghār Tāgh. This is the same as that noticed in the Itinerary to Mecca as the pass of "Karghah Kesmez" (impassable by crows). Another bridle-road to Tarsus takes its departure from where I before noticed is a khān; this was apparently much in use by the ancients. On one part of its course are a number of sepulchral grottoes, on another an inscription, and nearer to Tarsus the remains of an olden road, a sarcophagus and arch, the probable history of which is contained in Rennell's "Western Asia;" but this road continues for a long while in the hills, and is in many parts difficult. I speak here from personal examination. It is not improbable that it was by this road that Cyrus sent the Cilician queen, under guard of Menon, as the most direct to Tarsus. It appears also to have been the road followed by a part of Alexander's army, and is the same as the "It-gelmez" (inaccessible to dogs) of the Mecca Itinerary. Of the passes through Taurus N. of Gólek Bógház, I know little; but in our journey through the Bádinján O'ghlú district, Colonel Chesney and myself heard of none till we came to Sís. Indeed, the reasons for the preference given by

the Greeks, Persians, Romans, Turks and Crusaders, to the same pass may be inferred from the words of Strabo (lib. xii. p. 370), when he says, "*Tauro ad Cilicias portas: juxta quas facillimi ejus sunt omnibusque communissimi in Ciliciam et Syriam transitus.*"

After the necessities of the case, come "the facilities for affording supplies;" now these apparently always were, and still are, of the first order in "*Cilicia Campestris.*" Adanah has every winter a garrison equalling that of Aleppo, and is considered the third town in Syria. Tarsus, its port, is the place of residence of a French consul and English vice-consul. The last agent, Mr. Jones, loaded as many as twelve vessels annually from this port. The advantages were still greater when the populous Anazarba, afterwards Cæsarea, communicated wealth and productiveness to the centre of a now neglected district, and Mopsuestia was in its glory. When Mallus had fallen, a Christian monastery still rose upon its ruins. Sís, in the same plain, covered with castles (Túm, Seliyah, Meráneħ), is still the seat of an Armenian patriarch. From Issus by Baïæ to the Syrian gates is a garden of oranges and myrtles. Cicero, in his *Epistles* (and I regret not to have the passage at command), particularly notices the resources of Cilicia; and Albertus Aquensis, according to Cellarius (lib. iii. cap. vi. p. 255), talks of 3000 ships sailing from the port of Tarsus at once. Of all the sites between the pass of Taurus and that of Syria, Iskenderún, or Alexandretta, is the only one which may be said to have attained greater importance in modern times than it possessed at a more remote epoch.

Dec. 1st.—To return to our journey: we found at Adanah Ahmed Páshá and Khurshíd Páshá, who received us very kindly; the first speaks French, and was well known to us previously. In this hot plain, the soldiers were in their summer dresses, the thermometer marking at midday $22\frac{1}{2}$ cent. ($72\frac{1}{10}$ Fahr.), and in the sun, without blackening the bulb, 47° cent. (116^3 Fahr.) The castle, which was being destroyed when last here, remains in pretty nearly the same condition. An omission of that journey was now filled up—the river of the Seihún, at the bridge, is 325 feet in width.

Adanah, it may be remarked, although not so distinguished in the annals of history as Tarsus, was still in ancient times a town of much importance. It is noticed by Ptolemy and Pliny. Stephanus Byzant. says, "*Ab Adano, Cœli et Terræ filio, conditam esse.*" According to Dio Cassius, its inhabitants used to wage war with the people of Tarsus. The progress of the Crusaders, it will also be remembered, was marked by a sad quarrel at this place. The Bishop of Adanah had, according to the Ecclesiastical Notices quoted by Cellarius, a seat in the Councils of Nicæa and Chalcedon.

3rd.—Travelled over the plain to Misis. At this moment there were flocks of many thousands of small bustards on the plain. Misis is sadly fallen since my last visit, and contains scarcely thirty families. The Pyramus is perfectly navigable, and as well adapted to small steamers as far as this place and 'Ainzarbah as the Seihún is to Adanah; and I have often thought what a happy scene this most favoured vale of Cilicia would be in the hands of an industrious people, like the people of the United States. The numerous notices of Mopsuestia as well as its admirable position and extensive ruins, attest its former importance, which render its present condition so much to be regretted. In a former memoir, I compared the distances given by Xenophon and the Itineraries to Mecca and Jerusalem, with those obtained by the Surveys of the officers of the Euphrates-Expedition, and I have collected the various orthographies of this interesting site, but do not give them for fear of being tedious. For its importance, as further illustrating the peculiarities of this country, I may be allowed to quote Procopius: "Eam adluit amnis Pyramus, singulare urbi ornamentum ferens;" and an inscription given by Cellarius after Gruter, p. 255, which, bearing the title of Antoninus Pius, says, "Evergetæ ac servatoris Hadrianæ Mopsuestiæ Ciliciæ, sacræ, liberæ et Asyli, suis legibus viventis, et fœderatæ ac sociæ Romanorum."

4th.—We had a continued and heavy rain on our journey to-day. I was aware of the few comforts to be obtained at the miserable village of Kúrd Kúlák (wolf's ear), but scarcely anticipated the misfortune of being detained a day there, which, however, was rendered actually necessary by the bad weather. Thursday, the 6th, we passed the Amanian gates (Demir Kapú) and the ruins of Castabalum, and kept along the sea-coast, from which the ruins of Issus were scarcely visible, and hence, no doubt, the reason of their remaining unnoticed till the time of the Euphrates-Expedition. This line of road enabled me, however, to observe that the Pinarus, after losing itself in an extensive marsh, empties itself into the sea by a variety of small streamlets, which has occasioned much discordancy among travellers. Since the insurrection at the time of the campaign of 1839, Ibráhím Páshá has done his best to open a market in the long-deserted but beautiful bázár of Bayás, certainly a highly meritorious as well as politic measure. The Páshá is actively engaged in transporting wood from Amanus to Egypt. To accomplish this, he gives a pair of oxen to any family, more particularly preferring Christians from their steadiness, and out of the small allowance made to them for work, they have at the end of a year, if possible, to pay for the oxen.

8th.—The luggage being detained for want of horses, we went

on a-head to the house of Mr. Hayes, H.B.M., Vice-Consul at Iskenderûn. We found this little place much improved. Mr. Hayes had built himself a commodious English-looking house; the Austrian agent occupied the old consular establishment, and Ibrâhîm Pâshâ had also built granaries for rice and corn, &c. coming from Egypt. There is no doubt but that if this place is continued in the line of the Austrian steam-packets that it will very rapidly rise in importance. As it is, forty vessels, on an average, come every year to this port from Great Britain, and from fifteen to twenty from other countries. The day after our arrival, it blew one of those tremendous gales from the mountains which are so much spoken of as being frequent here; and in the evening we were only able to make our way to Beilân, where Mr. Hayes has a small summer residence, and to which we were made kindly welcome.

It is noticed by Strabo and other writers that Philotas led Alexander's horse by the Campus Alëius. Now by proceeding from Mallos to that plain, they would have crossed the Pyramus below Mopsuestia, but have been equally necessitated to pass the Ananian gates, between which and the sea is a basaltic knoll, rude although not precipitous, on the shore. I examined this particularly with the view to the possibility of the army, or any part of it, having been able to come along the shore. Hence it is quite correct to say, "Post Mallum, Ægæ sunt, oppidum cum statione, deinde Amanides portæ, cum statione." When Quintus Curtius (lib. iii. chap. 4) says, "tres asperos aditus et perangustos esse, quorum uno in Ciliciam intrandum sit," he means evidently the Gólek Bógház. Cellarius, I find, after reviewing the various testimonies, is led away by Polybius, who again founds his descriptions on the report of Callisthenes, to consider the Amanian gates of Strabo, Ptolemy, Arrian, and Quintus Curtius, as the pass over Amanus, by which Darius got to the rear of Alexander's army. Now Cellarius himself admits that Arrian in his account says, "*κατὰ sit juxta prope*," or, give the whole passage, "Darius superato monte, qui prope Pylas Amanicas est, Isson versus movit, Alexandrum imprudens a tergo relinquens." Now Polybius's language, as opposed to this correct and beautiful description, is only guess-work. "Jam Alexander, inquit, fauces et quas Ciliciæ Pylas vocant, superaverat: Darius vero per Amanidas Pylas ducto agmine in Ciliciam cum copiis pervenit." In the original it is, *Δαρεῖον δὲ χρησάμενον τῇ διὰ τῶν Ἀμανιδῶν λεγομένων Πυλῶν πορείᾳ*, etc., which conveys exactly the same impression.

Upon this occasion, without actually visiting the district, I looked carefully at the mountains, to see what opposition they would present beyond Issus to the passage of Darius' troops, and

they appeared to present several points, where few difficulties would be presented to an army without cannon. Cicero evidently led his troops into the heart of Amanus; for in his *Epist. xx. lib. v. ad Attic.*, he says he inhabited for several days the castle which Alexander had near Issus to defend himself against Darius. “*Ibi dies quinque morati, direpto et vastato Amāno, inde discessimus.*” In two epistles to M. Cælius he narrates the same thing. This castle, built by Alexander, has nevertheless been confounded with Issus, which as Ἰσσοὶ existed as a great and opulent city in the time of Cyrus. See *Anabasis*, pp. 147-149.

Whether Issus and Nicopolis were two different towns, as Strabo and Ptolemy assert, or the same as is stated by Stephanus, I have no new information; but the discovery of only one ruined city on the plain of Issus would appear to confirm the latter opinion. Probably a great many contradictory opinions may be found among historians regarding the Cilician, Amanian, and Syrian gates, and it can only be hoped that a correct geography of the country will always be referred to by future commentators.

9th.—A melancholy scene presented itself to us on our arrival at Antioch, in the actual decimation of the troops then quartered there: 700 men were in the hospitals, one of which is Ibráhím Páshá's late Palace (which he is said to have sold to Mōhammed 'Alí), and the average mortality was from fifteen to twenty per day. Upon inquiry of the medical officers, they attributed it to the common fever of the country; but upon visiting the hospitals I found the symptoms and course of the disease to present quite a different face. The attacks were sudden, accompanied by giddiness and great prostration of strength: this was soon followed by a comatose state; the tongue was paralysed, and the pupil fixed; and if powerful remedies were not early administered, the attacks proved fatal in from four to eight or twelve hours. The attention of the medical officers being roused to the true nature of the malady, inquiries were immediately instituted, most minutely, into the food and drink of these poor men; nor was it long before the corn was ascertained to be largely adulterated with the seed of the *lolium temulentum*,* well known in the East, and even noticed in Scripture, for its very fatal effects. Ibráhím Páshá sent orders to have the afflicted regiment removed to Aleppo, and for a time to be allowed perfect rest, in order to recover its strength.

The barracks built by this Páshá, from the old walls of Antioch, are still in an incomplete state. The quantity of cultivation around the town has much increased; but the prosperity within has, if anything, diminished. The old governor still held his situation,

* Zízán in Arabic; Zizania of the Greeks.—Ed.

but complained bitterly of the poverty of the country. Although exceedingly anxious to serve us, we were as usual detained for want of horses.

12th.—Rode in the afternoon to Jisr Ḥadīd (Iron Bridge). There is a strip of land on the banks of the Orontes, which is devoted to the cultivation of the culinary vegetables peculiar to Turkey, *bádinján* (egg-plant), *bámiyah* (*Hibiscus esculentus*), and *capsicum*. Ibráhīm Páshá has purchased this for sixty purses, or 300*l.*, and farmed it out. It probably yields more than 200*l.* a-year to its proprietor.

13th.—From Jisr Ḥadīd to Herem,* in a direction by a single bearing, S. 65° E., but deviously by the road, is the southerly prolongation of the plain of 'Umḵ. Herem is a remarkable place, and evidently the site of a former town. It is situated at the foot of the limestone rocks of Amgólí Tágh, noticed by Mr. Thomson, from which an abundant spring issues, and is remarkable for its large mound of ruins, which rises from a still more extensive platform beneath. The situation of Gindarus, the "Acropolis Cyrrhesticæ" of Strabo (lib. xvi. p. 517), also called "Arx Cyrrhesticæ," and renowned as a resort of robbers, is well known as being now the tepeh at present called Jindarís, or Chindarís.† By most writers it is placed in Cyrrhestica; but by Ptolemy in Seleucis. Be this as it may, between it and Antioch was Gephyra (Bridge), according to the Pentengerian tables 22 miles M.P. from Antioch, and at a similar distance from the "Gendarum" of the tables. There are no ruins upon the plain of 'Umḵ at those distances; and no doubt the old road, like the modern one, whether bound from Antioch to Aleppo, or from Antioch to Gindarus, was forced to take the same line as in the present day, which will alone give the quantities required by the tables, and which at the same time demonstrates, almost beyond a doubt, the identity of Herem and Gephyra.

The Amgólí Tágh, with its culminating point, called from a tomb upon its summit, Sheïkh el Barakát, but better known to the Aleppines as Mount St. Simeon, is remarkable for the great number of villages, monasteries, and other sacred ruins, profusely scattered on its most barren rocks, or in its stony and almost inaccessible valleys. These edifices, belonging to the early ages of Christianity, are remarkable also for the architectural skill with which they are constructed, and which, in massive simplicity and correctness of style, far exceed any modern buildings in the same country. Colonel Chesney has in his possession drawings illustrative of their peculiar features, rendered still more interesting by

* More correctly Ḥárim, pronounced Hérem.—ED.

† The Arabs have no *ch*; but the Turks, Kurds, and Persians have that sound; therefore this name would be pronounced Chindarís by the latter, but Jindarís by the Arabs.—ED.

the well-known Saint Simeon Stylites, who, according to tradition, performed his extraordinary penance amidst these rocks.

Scarcely 3 miles from Hērem, the first mines belonging to the period now mentioned are met with. They are upon the banks of a rivulet, over which was carried a goodly bridge. It was a large village, apparently with two churches : 2 miles from thence are the ruins of a church, and adjacent to it a lid of a sarcophagus, in the Byzantine style. We had remarked at Tium the body of the sarcophagus, formed of laminar rock, *in situ*. Here a tomb was also excavated in the solid rock, the lid alone being moveable. This is, however, very different from the real Byzantine tombs at 'Ainzarbeh, or the splendidly ornamented sarcophagus at Pompeiopolis.

A little beyond these ruins we began to ascend the hills. The tall houses of a former population stood prominent on the top of the hill to the right, while in our immediate vicinity were ruins apparently of a different age. These now presented only a circular mound, with successive terraces of small stones, irregularly piled, so as to form a fortification similar to those described as made by the ancient Britons. We found another of these mounds commanding a narrow pass, previous to our arrival on the plain of Dáná. They appear to be of great antiquity, and were undoubtedly meant for the defence of the road to Chalcidene and Chalybone, and which appears to have been carried along its present line long before the monks hemmed in the hewn pathway, as they appear in some places to have done, with so many begging-boxes.

Curving round this antique mound, and after a short ascent, an interesting scene presents itself,—a deep hollow in the rocks, at the bottom of which are the tall ruins of an abbey, while high up, on the opposite acclivities, is a large and inhabited cavern. Hewn reservoirs for water, of large dimensions, and having staircases to the bottom, occur occasionally by the road-side. They certainly indicate a most patient and laborious industry on the part of the tenants of these stony wildernesses. Passing by a ruined house of the same period, the road enters a more level valley, having a general direction of S. 55° E., and only from 200 to 300 yards in width: the remains of the ancient road are quite evident all along the centre of the valley; and near half way, there is now, and was formerly, a cross-road, which was indicated by a huge stone with an effaced inscription, which now lies in a falling condition. At the end of this vale are more ecclesiastical ruins, adorned with Ionic columns; and here the old road was hewn out of the rock: a little beyond, two rows of hermits' cells occupy both sides of the road; and passing these, the traveller enters upon the remarkable plain of Dáná, which extends to the

foot of Mount Saint Simeon on one side, and S. 35° W. from Dáná to beyond the visible horizon.

Although this plain, which is very level, is badly supplied with water, still it ever has been, and is still, remarkable for its fertility. Even in the hands of the poor peasantry that have outlived conscriptions, taxations, and levies innumerable, it still presents a most promising aspect. The chief objects of cultivation are maize, cotton, bádinján, and bámiyah. The land not being divided into small compartments, as with us, these are planted out in lines of exceeding length, which are skilfully straight and regular; and I have seen as good work done here as at a prize ploughing-match in Picardy. Dáná, which is a modern village, upon an antique site, and can show, besides two ruined churches, a very pretty little circular temple, is situated in nearly the middle of the plain; but the ruined villages of the former Christian cultivators of the soil are placed all round the plain, at its edges, and upon the usual rocks. I took bearings of no less than nine villages so circumstanced; and there are still more, as they are frequently hidden in recesses in the hills. Ibráhím Páshá lately sent some of the farmers of this plain to colonise the plain of 'Umk, and, if possible, redeem cultivable portions of that neglected country.

14/h.—Nearly 3 miles from Dáná we left the plain, and found ourselves once more upon a stony road, over low hills, or rather an undulating country of hard limestone rock, with a nearly horizontal stratification. The only possible way of making a road across this country, available for draught, would be by macadamization, and the expense would be very great, whereas the road from the Euphrates by A'záz might easily be put in order. I understand, however, that there is also a good line to the S. There were numerous ruins to our right; and we crossed a valley with an old khán and another ruined village, and then ascended to Injir Kõï (fig-tree village), where that fruit tree is cultivated in little holes in the rocks, or by piling up stones.

Passing along a rocky upland, about 2 miles from Injir Kõï, we came to more ruins, besides which others presented themselves to our view on the adjacent hills or their declivities. The road did not alter its character much until long after seeing the lofty battlements of its now ruinous castle—the great multitude of houses, churches, and minarets that belong to the famed Aleppo opened all at once upon our vision from the brow of an adjacent hill. Here, for the first time, igneous rocks succeed in the valley of the Koweik (Chalus) to the long-continued limestone, and a contrasted configuration, and a soil available to the purposes of humanity, spring from this change in the structure of the earth's crust.

15th.—We were hospitably received in the commercial house of Mr. Kilbee, but afterwards removed to that of Acting-Consul F. Werry, Esq., who did everything to assist us in recovering some of our losses at Nizib. Suleimán Páshá (Selves) had been very polite upon the occasion, and particularly requested the Europeans in the service of his highness the Páshá to give up to the British consul all papers, instruments, or books of a scientific nature which might have fallen into their possession. Mr. Werry had then recovered a few papers, chiefly duplicate copies of maps and astronomical calculations; but although we traced and heard of the local distribution of some of our instruments, we were unsuccessful, after a long delay, in obtaining them even by the offer of repayment.

There are several British mercantile houses, and much competition in the market. Goods are consequently given with little or no security, and great losses are thus sustained. It is indeed no uncommon thing in Aleppo for a native merchant or trader to obtain a certain quantity of goods on credit, and to remit the "groups" directly to England for new goods, instead of paying his original creditor. A considerable loss has lately been sustained by several houses, from an attempt made to introduce into the British market the Valonía and galls of Amanus, which proved a failure, perhaps from mere opposition. In what can these products, so abundant in Amanus, differ from the similar products of Kurdistán? Perhaps it may be answered upon the same principle as the various produce of different vineyards; but the oak, especially the Valonía,* which is an evergreen, while the galls of commerce are furnished by deciduous species, is an obdurate and stubborn plant, not easily affected by slight causes. The commerce that is not British is of a very trifling kind, and seldom embraces the wide field of manufactures. It is much to be regretted that, since the occupation of Bíreh by the Egyptian forces, the Páshá has thought proper to put an additional tax upon each camel-load passing that great thoroughfare.

Jan. 5th, 1840.—We had several falls of snow during our stay at Aleppo; but, contrary to our hope, the cold did not last. Having set out in a fine warm afternoon, we only reached the district of Hailán, where we had much difficulty in finding a lodging: most of the houses being occupied by soldiers, we were hurried from one village to another, till we at last settled at Meherítei. This word, as Mr. Rassám remarked, is Syriac, and signifies "the two brothers:" the name of the district, Hailán, signifies "powerful," in that language. This circumstance will assist, probably, in throwing light upon the remarkable ruins at 'Ak Deyavín and Jinder Abá, which probably belonged to old Syrian families.

* *Quercus Ægilops*.—Ed.

6th.—What was frozen during the night was generally thawed by the sun during the day. We had, however, a cold piercing wind in our faces, which compelled us to dismount and walk on at a quick pace. We left a lake to our left, then crossed the Koweik (Chalus) flowing S.E., and in order to connect this country with A'záz, our former line, we went up the banks of the river, by a small village and Tell, from which we enjoyed a good prospect of A'záz, and its Tell and adjacent hills and the more distant Killis. We then turned back to the S.E. to 'Aḳ Deyavín, whither our baggage had gone direct. In attempting to cross the country our horses got so deep into the mire, that at one time we were almost in despair of being able either to proceed or to return. 'Aḳ Deyavín is remarkable for its Tell; (and in this country almost every village has its mound—Tell in Arabic, Tepeh in Turkish;) surrounded by ruinous walls built of gigantic stones, which support the declivities of the hill, and show that it is certainly a work of art. Tell Báshir, in this district, as is well known, was the site of a castle at the time when the crusaders carried their arms by Bíreh to Edessa. That some of these mounds are natural there can be no doubt; as some, also, are in part natural, and in part artificial.

7th.—We passed by Jinder Abá, where there is a Tell of trap boulders surrounded by a wall, and where the A'záz and the Aleppo roads join, to the village of Hálá O'ghlú—a station well known to Mr. Rassám and myself. The next day, *January 8th*, crossing the Sájúr, we quartered ourselves at Ékishá, a small village; whence on the ensuing day, *January 9th*, we reached Bíreh or Bíreh-jík, after a journey of 6 hours. For the last 2 days we had had much rain, and our old enemy ague had assailed both Mr. Rassám and myself. I have nothing further to remark upon what has been previously published respecting the geology of Northern Syria, than that the succession of formations at Aleppo, on the cliffs overhanging the river Koweik (Chalus) to the W., are from above below—

1. Hard, coarse, cavernous limestone, with ostracites, conides, pectinides, turritellæ, a donax and a venus. This is the formation which appears to constitute almost all the Emgólí Tágh, and which has been designated as a conide limestone; but as it here lies upon plastic clay, it probably represents the "calcaire grossier" of the Paris basin.
2. Greyish-green rock, earthy and soft; sometimes a greenish clay not fossiliferous, with veins of aluminite and talc spar.
3. Red and green thermantides.
4. Blackish-grey spilites (a coarse paste, with nodules of calcareous spar).
Spilites and basanites.

These formations are succeeded to the E. by irregularly fissile chalk, which there contains no fossils, but occasionally flints. At Jinder Abá a rather extensive district of basanite commences, succeeding the hills of yellow fissile chalk to the N., and extending far away to the S. : to the E. it is itself succeeded by yellow chalk within about $3\frac{1}{2}$ miles from the Sájūr (in which the conglomerates are probably a local formation), while the trap rocks form cliffs which stretch away to the S.E., above the level of the surrounding country. The diagonal line followed from Aleppo to Bírēh enables me to make these little additions to the geology of this tract, and serves further to illustrate the frequent occurrence in these countries of igneous rocks between the chalk and supra-cretaceous deposits. Bírēh was occupied by the troops of Moḥammed 'Alī, who were for the most part quartered in the mosques, while the fine old castle, a noble monument of the Macedonians, Saracens, and Crusaders, was now abandoned. The few old guns and the little ammunition, which it could boast of, had been removed to Aleppo, but many of the former were broken up on the road.

While we were at Bírēh the weather cleared up and was followed by a sharp frost, which materially improved the health of the party, so that we were enabled to continue our journey, (Sunday, *January 11th.*) when we travelled 10 hours to Chármelik, a village with huts like bee-hives, so common in the plains of Ḥarrán and Serúj, where wood being very scarce, flat roofs are superseded by ingeniously contrived spherical or dome-like coverings of sun-dried bricks. There are some villages thus constructed in Northern Syria, and they are always the dread of travellers, as they abound more in vermin than any others. There is an ancient Tell at Chármelik, besides a modern khán; and this place has been marked in the maps as the site of Anthemusia, the capital of the district so named. That site, however, is far from being satisfactorily determined.

12th.—This day we reached U'rfah, where we found Moḥammed, commonly called Ma'jún Beg, commander of the irregular troops attached to the Egyptian army in Syria, stationed with three regiments of infantry, besides a great number of irregular cavalry, who were continually employed in foraging parties in the plains of Mesopotamia—Súverek on the one side, and Rás el 'Aīn on the other, being their points of rendezvous. The time of the year, at which the battle of Nizib took place, brought the Egyptians in; for the rice-harvest of the plain of Serúj (Batnae), and of Ḥarrán (Charran), is by far the most productive in all Syria or Mesopotamia. On the plain of Serúj alone there are upwards of twenty villages whose inhabitants are employed in this branch of husbandry. The military are, as usual, distributed in the

mosques; and one of the prettiest of these, that of Ibráhím-el-Khalíl, is also sacrificed; but the sacred fish are allowed to remain unmolested. Ibráhím Páshá appears by the system now generally pursued, to wish gradually to overthrow certain Moḥammedan prejudices at their very foundation. The large barrack of the Turks alone is in part put into requisition; and the castle is shut up; so that I could not copy a Syriac inscription which I heard of in my former journey. The traveller will find in the valley N. of the castle two ponds, both full of sacred fish; that near the mosque is artificial, that near the castle, natural; and at its head there are several abundant springs of water, which in cold weather feels quite warm to the hand. Three of these, carefully examined, gave a similar and uniform result of $+ 21^{\circ}$ centigrade ($69\frac{3}{4}^{\circ}$ Fabr.); the atmosphere being at the time $+ 4^{\circ}$ centigrade ($39\frac{3}{4}^{\circ}$ Fabr.).*

The rivulet which flows past U'rfah to the E. and N.E. is called *Qará Kóyí*; but I fear my authorities were ignorant persons. Procopius calls it Scirto, and D'Anville *Daïsan*. The latter has got, from some unknown source, most exaggerated accounts of its occasional floods: perhaps they are derived from some notice of a spring about a mile W. of the town, which is said sometimes to overflow with a roaring noise, in which the good priests of U'rfah say the miraculous handkerchief, having the impression of our Saviour's face, was lost.

Ma'jún Beg was extremely civil; wished us, while at U'rfah, to live at his expense; and, representing in a strong light the dangers of the road that lay before us, was anxious for our taking a guard of irregular horse; but at length consented to our starting with one horseman and a *cháúsh*, or officer of irregulars, by name *Hájí 'Alí*, a bedwín from Tunis, of great activity of body, and well known by his fearlessness. Besides this, we had our *tátár*, a useless old man, two servants, and two *súrújís*. This made up a goodly party; but it did not take away all anxious curiosity about the results of our journey across the "Mesopotamia Mediterranea" of Cellarius, where the roving tribes, always uncertain in their allegiance, did not now know under whose dominion they lived, while they were daily exasperated to acts of

* U'rfah, according to a notice in Bell's Geography, is in $37^{\circ} 10'$ N. latitude. The mean temperature of such a parallel, according to De Humboldt, would be about 64° Fabr. At Mósul, in a lower latitude and less exposed situation, the spring of *Dámamahgáh*, "Thisbe's well," presents, from Mr. Rich's observations compared with my own, a pretty constant temperature of 66° Fabr. So that the *Ain-el-Zilghah* may be decidedly considered as having a temperature exceeding the annual temperature at U'rfah. Their preserving this high temperature during winter prevents the ponds which they supply being frozen, and is, as we first observed at the spring in *Ishik-Tágh*, in Anatolia, highly favourable to the propagation of fish.

robbery by the wholesale plunder that was committed upon them by those who called themselves their rulers.

15th.—We were only enabled, as at Aleppo, to set off in the evening; but in this country “the start” is everything; and, passing Gúrmish, a small village of Christians, we crossed a large rivulet, flowing from a glen with a village to the N., where hills of chalk abounding in flints succeeded to a district of basanite. We travelled over these roads for three hours to Kārā Tepeh, a hill with a village of from thirteen to fourteen houses and a few tents. A little beyond it is the Jáláb,* here 30 feet wide by $1\frac{1}{2}$ to 2 deep. According to Procopius, as quoted by D’Anville, there was a castle called Kalaba, where the Jáláb leaves the foot of the hills; and this would correspond with the position of the mound now called Kārā Tepeh in a district where the Turkish language is now seldom spoken.

16th.—Our road lay over an undulating country of horizontal limestone of the chalk formation, and we travelled in a circuitous manner, always following the valleys, which had an uncommonly deserted appearance. We fell in, however, after 2 hours’ journey, with some tents, where we sought to take a new guide and leave the one we had brought from Kārā Tepeh to return, but our Bedwíns had much to do, and plenty of blows were distributed before the stubborn Kurds could be got to move. A little beyond this place, we came upon a more open valley, towards the head of which was a large encampment: we however turned up a valley to the right: it was snowing so densely and blowing so hard, that we could scarcely see or hear one another: we had all been long anxious for a halting-place, when coming up a hill more bleak and exposed than before, our guide made a halt: he no longer knew his way, and the village he was leading us to was gone. Nothing that I could say could ward off the blows he got from the Bedwíns: there was however only one course to pursue, which was to return 2 wearisome hours to the encampment: our jaded baggage-horses tumbled at every other step; but Hájí ’Alí, with his yellow boots, was off and on his horse like a mouse, and one of our servants kept up his courage and gave quick assistance. The evening found us endeavouring to make a fire of a little damp grass; but it was of no avail, and sleep we must in our well-drenched clothes.

17th.—There was another disturbance this morning about guides. Hájí ’Alí was dealing about blows with a heavy stick, his turban having fallen and left his head bare, while his friend was using the butt-end of his gun. Several Kurd horsemen, with an

* Jáláb, anciently pronounced Gáláb, is identical with Kalaba.—Ed.

expression of countenance that was anything but friendly, had ridden into the tent, and the Tátár was eyeing them askance, pretending to be engaged in saddling his horse. As I had previously balanced means, and knew that we could beat the whole encampment by the superiority of our arms and men, I watched the result without interfering. The Páshá's authority was ultimately recognised, and a proper mounted guide was given to us: he did not, however, prove of much use: we retraced our steps to the place whence we set out yesterday evening, and then the snow was so deep over the adjoining upland, that no trace of a path was to be found: the guide and Hájí 'Alí were active in ascending hills wherever a glance could be obtained of a new country. At length, after a tedious ride, we reached an abandoned village, from whence we obtained a view of the fertile district of Mízár, where trap-rocks, succeeding to the limestone, a sort of cultivated oasis occurs, dispersed about which are many villages of tents; in one of which, called Chabákchú,* we found another fire made of grass, and space enough for a nap. The igneous rocks of the Mízár district extend to the Karájah Tágh, distant N.E. about 10 miles: they also occur at intervals, and occupy by far the greater part of Northern Mesopotamia, from hence to the foot of Masius near Márdín.

18th.—We travelled over a cultivated plain, covered however with large stones, 2 miles to Zibillí† village and tell: here we changed our guide, and then pursued our journey generally in a direction from S.E. to E., passing several villages and tells, among which was one called Tell Gauran (Gabr's hill), with a ruin on its summit, said to be that of a Christian church, till we came to Tell Ja'fer, where it was settled that we should pass the night: some parts of the road had been very stony and others very muddy: it was like the country near Jezíreh, and is very bad in winter: it is worthy of mention, that although snow from 6 inches to 1 foot deep covered the limestone district, the moment we came upon the basalt and basanite, none was to be seen. The outline of the country is also quite altered, and an infinite variety of low rounded hills with grassy valleys intervening, is succeeded by long sweeps of cultivated or barren soil, occasional spots being covered for miles with nothing but loose stones. This district is traversed by many rivulets, chiefly in beds having rocky sides: villages inhabited by Millis Kurds (not Turkománs, as stated in some maps) with their accompanying tells, are to be seen in every direction. To the S.E. the plain is bounded by the hills of Sinjár; to the S.W. by those of 'Abd al 'Azíz, and between the two is the very remarkable hill called Tell Kaukab (Star hill).

* Chibúkchí?—Ed.

† Dung-ville.—Ed.

Nearer to the N.W. are the hills just traversed, for which I could find no name. To the N.E. *Ḳarājah Tāgh*, and beyond it the rocky and snow-clad summit of *Masius*, were now distinctly visible. *Ḳarājah Tāgh* is a rocky range of conical summits of trap-rocks, running nearly N. and S. between the districts of *Súverek* and *Diyār Bekr*. Mount *Masius* commences at the flourishing and wooded village of *Derrik*, from which it first takes its name, and consists of a range of limestone hills, which terminates rather abruptly in the plain. On one of the boldest of these rocks *Márdín* is singularly perched, while beyond it, the precipices dwindle away, and are occupied by the monasteries attached to *Deiri Za'ferán*. The prolongation of these hills to the N.E. is the celebrated *Jebel Túr*. From the *Deiri Za'ferán*, low hills advance to the S., and bear the ruins of *Dará*: they then sweep round to the E. opposite *Niṣbín*. The waters of the *Jakhjakhah* (*Mygdonius*) make their way between two Christian villages, and the hills become more lofty (the *Ḳarājah Tāgh* of Mr. Forbes), bearing upon their declivities the castle of *Khalifah* (once a notorious robber of these districts), which is visible from the road to either *Jezíreh* or *Mōsul*, and gives its name to these mountains. Not far from this the limestone is succeeded by trap rock, which forms the conical hill of *Ba'arem*, and a low range which descends down to *Jezíreh ibn 'Omar*; a little to the N. of which, this last prolongation of *Masius* is only separated by the *Tigris* from the bold precipices of *Jebel Júdí*, which there form a pass well known since the days of *Xenophon*.

10th.—We went a little out of our road, although the anxiety of our guard was increasing as we approached within sight of the castle of *Márdín*, to visit the ruins of a city called by the natives *Kóhrasár* or *Koh Ḥiṣár** (high head or castle mount). We found the ruins to be more extensive and remarkable than we had expected, and regretted that circumstances did not allow of any delay for measurement and minute examination. The walls of the city were built of good square hewn stones (basalt), like those of *Diyār-Bekr*, and were defended by square and round towers. The towers on the N. side preserve about half their original height, but on the other sides, are more ruinous: the space included within the walls is nearly square, and the extent of any one of the sides from 600 to 700 yards: the whole of this space is filled up with ruins of houses, except towards the E., where there is a large mound, apparently once a building of some extent. The houses were constructed of hewn stone with semi-circular arches and intervening masonry: many of the arches are still standing. We found no inscriptions nor Babylonian

* This name is probably incorrect.—ED.

bricks, but by no means explored all the ruins which cover about a mile of ground in and outside of the walls. By far the most remarkable remnant connected with the ancient place is the burial-ground without the walls, which with respect to its construction and arrangement, is the most perfect necropolis that I have ever seen: each tomb was a separate and distinct mausoleum, built of massive hewn stones, forming a chamber with three arcades, one fronting the entrance and one on each side: each of these arcades was divided into two parts, by a huge single slab of basalt, so as to contain one coffin above and one below, or six in the same sepulchre. The door itself consisted of another heavy mass of basalt, swung upon hinges cut out of the rock, and received into circular holes in the building.* Although many of them were quite perfect, it required a man's strength to move them; and as a portal was thus left to the houses of the dead, it appears as if, as in Egypt, the inhabitants had been in the practice of visiting them; and in the interior there was space for two or three persons to walk about in: these tombs were in part underground, laid out in regular rows, of which there were about twenty, each containing nearly 100 tombs: amidst these are the more lofty ruins apparently of churches, not unlike, as are also the houses, those at Garsaura: one of these was tolerably perfect; of another the walls only rose like pillars from the plain.

It is impossible, from what we could observe, to form any satisfactory conjectures as to the antiquity of this city; but the crosses sculptured upon the portals of the tombs and the character of the churches, show that it belonged to the Lower Empire, and to a Christian community.

We had a long journey this day, passing several tells that had lost their accompanying villages, from the ruins of which we now only disturbed some grunting boars, then lost our way in a wide grassy plain, and soon afterwards our guide, who turned off, or made off to the left, while Hájí 'Alí was reconnoitring to the right; but we ultimately reached some Kurd tents, where, notwithstanding their protestations against receiving us, we persisted in quartering ourselves for the night: on the whole, the conduct of these Kurds must be looked upon as very creditable to them, more especially when it is considered that any robbery committed at the present moment is certain of a perfect immunity.

20th.—Our active Bedwíns were obliged to part from us this morning, moving off over the plains to Rás el 'Aïn, while we

* Lord Lindsay found tombs with somewhat similar massive stone-doors from 5 to 6 inches thick, and still moving on their hinges, at Um Káis, probably the ancient Gadara (*Athenæum*, No. 564). These tombs were inhabited, and my companions would have the tombs of Koh-Hīṣār or Kohrasar, to be also houses.

crossed a stream called Jahjah,* where there are the ruins of a bridge:† we now regained the great caravan road, and after a ride of 5 hours arrived at Meskó, a stationary village, where we found some of the Sultán's irregular troops: they looked at us with wonder; but the presence of a government Tátár saved us from troublesome inquiries and examinations. At this place there is some columnar basalt or rather basanite (augitic basalt), the columns of which are twice the size of any at Staffa or Fairhead, which are themselves larger than those at the Giant's Causeway. About 2 miles from Meskó some ruins indicate the former existence of a village; another, of which the tall minarets attract the traveller's eye on the road from Mósul to Márdín, as well as on the present road, is called Kochasár, no doubt a corruption of Kóch-Hisár, and was formerly a place of some importance. We travelled till dark, and stopped at the small village of Gurmalah, the castle of Márdín bearing N. 66° E.

21st.—On our road to Márdín we passed a valley with rivulet and olive-groves, beyond which there are two villages built on the naked limestone. This place is called Kursú or Gurusdán. I had intended not to go up the hill to Márdín, but await at Gól, a Christian village on the plain S., a little W. of the city: as, however, some delay was likely to arise from our remaining below, we trudged up that tedious ascent, and exactly one hour from leaving the plain found ourselves at the level of the lower wall of the city.

22nd.—When Turkish affairs assumed so unfavourable an aspect as they did upon the late success of the Egyptians, and the overthrow of the Sultán's armies of seven years' growth, Márdín was one of the first towns to revolt in favour of the old state of things: everything that was European was discarded; the new military dress was looked upon as the cause of all misfortunes, and the Turks to regain their wonted superiority, had nothing to do but to reassume their old clothes. Not 7 years ago Márdín underwent, from its perpetually mutinous spirit, all the rigours of a capture by the troops of Reshíd Páshá, at which time, a mine was so skilfully exploded as to destroy a number of the Sultán's troops and a jámi' or large mosque, without in any way affecting the position of the mutineers, who had fled into the castle: since that time it has been attached to the Páshá-

* Or Jakhjakhah. See p. 527.—ED.

† This river is a tributary to the Kaukab, if not that river itself, which may change its name near Tell Kaukab. It appears from Mr. Forbes's Memoir that all the streams flowing from the S. side of Karájah Tágh and the Márdín hills, fall into the Khábúr before the rivers of Nisibín, 'Aznawár, &c., which again unite with it before its junction with the Hólí.

lik of Diyár-Bekr; and when the Sultán's government hastened, in the midst of its difficulties, to secure its authority, by the appointment of Sa'dullah Páshá, the people of Márdín saw no alternative but that of surrendering or going over to the Páshá of Mósul. The bigoted adherence of the latter to many of the exclusive Mohammedan superstitions, had gained for him many adherents in the city of Márdín, and he was accordingly allowed to send a governor there, and a small body of troops, for which he no doubt received the thanks of the supreme government. Ibráhím Páshá will doubtless soon take possession of this town, when probably the ruins of the castle will be still further prostrated, and this unruly community will be sent to cultivate the beautiful plains that lie at its foot. In the mean time authority remains on but a ticklish foundation, and while the Egyptians are sending an agent to Dará, which gives them the command of the great road from Constantinople to Baghdád, Sa'dullah Páshá is rifling the unfortunate Derrik on account of a real or supposed correspondence with the Chieftain of U'rfah. The irregular cavalry, of which there were from 1000 to 1500 at Márdín, were constantly employed in scouring the surrounding country in pairs; but they performed their duty without spirit. Márdín, which, from barometrical observations made during my former visit, I supposed to be 3125 feet, I now think, from further consideration, not to be more than 2300 feet above the level of the sea. From the castle of Márdín, Tell Kaukab bears S. 4° E.; the Sinjár hills extend generally from S. 54° E. to S. 12° E.; and the hills of 'Abd-al-'Azíz from S. 6° W. to S. 42° W.; the road to Mósul S. 21° E. The prospect from Márdín is one of the most striking that can be well conceived, not only from the almost infinite extent of cultivated land that lies stretched out at its feet as on a map, from the numerous villages and hillocks with which they are studded and which dwindle away in the distance to a mere mole-hill, but also from the vast and almost boundless expanse of nearly level ground unbroken by trees or rivers, and for the most part sinking gradually from sight to the utmost verge of the horizon, where everything is indistinct, and here, from the great height at which the spectator is placed, so extremely remote.

23rd.—As usual on the first day we only just made a start, for when the horses were brought, every one was found to want shoeing: we were joined here by a bishop and priest of the Church of Rome, who were going to Mósul: they had been to Constantinople in order to obtain a fermán for building a church, but had only succeeded in getting authority to divide one or more of the existing Jacobite churches into two parts by a central wall, which has in one case been carried into execution since our

arrival at Mósul. We only travelled 3 hours to Harín, a village and tell.

24th.—About $3\frac{1}{2}$ miles from Harín is Kaşr Borj, a ruin of the same age as Dárá, being part of a castle in which, according to a tradition mentioned by our companion the bishop, a son of Darius once lived: $4\frac{1}{2}$ miles further on, we left the ruins of Dárá, with its vast granaries, remarkable tombs, and beautiful reservoirs, on our left. In front of Dárá there is another large granary still called Anbár Dárá: the river of Dárá, after flowing down into the plain, supplies the wants of a large village called Aḥmedíyah: from hence we bore away by rather a devious route to another ruin called Kaşr Serján S. 70° E. from the tell of Aḥmedíyah, from which it is about 8 miles distant. Of these ruins in the form of a parallelogram, nothing remains except the foundations and part of two octagonal towers, one of which is almost gone. In the evening we arrived at Nişibín.

After the campaign of Sinjár in 1838, Háfiz Páshá attempted to renovate this very ancient city in a still fertile tract of country. A village was founded; protection, with some immunities, were offered to its inhabitants; and a jámi', with a large square building, called a kaşr, but serving as barracks, and a khán, were erected under the superintendence of Mírzá Páshá, a general of cavalry, who fell at Nizib, and was notorious in this neighbourhood for his exactions at Márdín: a large farm was also established; but all is now neglected: a few trees were planted, but it is doubtful whether they will succeed, as it is commonly believed that trees will not grow in these plains. Some new foundations had lately come to light; but I could not learn whether any antiquities had been met with in these excavations. The two tall columns of marble mentioned by Mr. Buckingham, and the church of St. James, formed from fragments of the ancient Nisibis, and containing some beautiful friezes, still remain to remind the traveller of a spot so often mentioned both in civil and ecclesiastical history.

25th.—We had some fine frosty weather; but our companion the priest could not get rid of an ague which he had caught on his journey, crossing the Mygdonius.* We passed Antari and Latíf, small villages, and a Christian village called Dezán Dik, perched on the very summit of the Márdín Mountains (Masius) to the N. We came to Tell Jihán, where, on due consideration, it was thought advisable to stop, after a journey of only $4\frac{1}{2}$ hours. The inhabitants were most brutal and ill-behaved, and gave us much trouble, although we had obtained a guard of four horsemen from

* The natives call the Mygdonius Jahjah, or Jakhjakhah, as well as the second river west of Meskó.

Nişibín, and were altogether sixteen persons, our party having increased as we went along, as travellers who intend to cross Sinjár wait in the neighbourhood till others come up, that they may altogether form a considerable body.

26th.—We passed the mound and village of 'Aznawár, with a rivulet and a few trees : and one mile beyond it, is a more rapid stream, the Hassáwí of Mr. Forbes, which bounds the basaltic district, the limits of which, from Jezíreh westwards, are traced in my former narrative. The country now changes from a cultivated to a grassy plain, broken by occasional ravines and rivulets. After a ride of 7 hours, we came to Chil-aghá, two villages close to each other, where we were received by a lady who has the management of the post, and was immediately converted, by a small handkerchief, into a warm friend. We accordingly fared well at Chil-aghá, and a lamb was killed for our supper ; but our party had become so numerous, that by some strange accident it was consumed while dressing.

27th.—We now entered upon a still more desolate tract than that which we crossed the day before. Eight miles from Chil-Aghá was a tell with four tents, the inhabitants of which had been lately robbed of their flocks by some of the Sinjár people. They lived under the jurisdiction of Jezíreh, and the governor of that place had despatched 300 to 400 horsemen, whom we had seen the day before on their way, to endeavour to recover some of the lost sheep. The tell of Rumálah, as it is called, which we were now passing, is the commencement of that part of the high road to the E. which has been the scene of so many of the foul deeds committed by the followers of Khalifah on the one hand, and the tribes of Sinjár on the other ; but they were always assisted by the villagers. The country is a nearly level and uninterrupted greensward, without water, and with only here and there a tell or mound to break its uniformity. By a proper distribution of the waters descending from Masíus and the Ba'arem hills, it might however be in great part brought into cultivation, and made to maintain an industrious population, instead of the worthless vagabonds to whom it is now abandoned.

Every one of our party now began to enliven the tedium of the road by tales of robberies and murders committed at various points. The Tátár had his tale, the Súrujis theirs, and most of the travellers added to the general stock. I could not, however, help feeling a melancholy interest myself, when a mound called Chár Perú was pointed out to me as the spot where Mr. Taylor and his unfortunate companions were murdered some years ago. Such occurrences are so many indelible stains upon the government under which they occur ; for the tribes of Sinjár are not like the Bedwíns of the Desert, and might, with a little trouble

and expense, for which the government would ultimately be repaid, be kept in order.

The mound of Chár Perú, and another of larger dimensions, which we passed on this day's journey, were mere accumulations of ruins, abounding more particularly in pottery, and apparently of Saracenic or Persian origin. The second mound of ruins here noticed is called Athlán Tepeh-sí,* and appears to have been a place of much magnificence. We slept this night by the side of a brook called Aiwánet, our party separating itself into many different groups, busily but vainly endeavouring to blow some wet rushes into a fire.

28th.—We were now approaching the Tigris, and the red sandstone and gypsum deposits on the E. side of the river formed low ranges of hills, stretching into the plains of Mesopotamia, Jebel Ghárah to the N.E., consisting of sandstone, and the more lofty Jebel Músh to the E., of gypsum; both ranges running N.W. and S.E. At the foot of Jebel Músh is a tell of the same name: on this mound there is a castle erected by Ahmed Páshá, the predecessor of Moḥammed Páshá, as governor of Mōsul. It was built with a view to keep in subjection the tribe of Arabs who dwell on the banks of Tigris, and in the vales W. of Jebel Músh, not far from the site of Eskí Mōsul. This tribe, which has for many centuries been here established, is called the Mōsulí 'Ashirat, i.e. the Mōsul-tribe.

Further onwards we came to another fort, also built by Ahmed Páshá, and called Fauḳání Maráḳa, to distinguish it from a tell at a lower level near the meeting of two brooks, called Maráḳa Suffí.† In the evening we reached Abú Marri or Abú Maryam, described by Mr. Forbes as a ruined village, near which there is a most abundant spring of brackish water, forming a small brook, which is, however, soon lost in reedy hollows. This abundant spring is a subterranean rivulet, at that time 16 feet wide and 2 deep, just issuing again from the earth. Phenomena of this kind are exceedingly common in the gypsum-district near Mōsul, where waters after sweeping along for some distance beneath the superincumbent light and porous rock, reappear in deep ravines of the same rock, perhaps again to be lost in subterranean passages, till these fall in and disclose a brook or open a valley. On this road, about 2 miles from Abú Marri, there is a remarkable subsidence of this kind; and there is another near Mōsul, where people go to shoot pigeons. This is easily understood; but there is another feature in the gypseous districts not so easy of explanation, although very frequent; it is the elevation, at the surface of the earth, of beds of gypsum, like so many semi-

* Tamarisk-hill.—Ed.

† Or Suffání.—Ed.

circular domes. These are sometimes small, at others larger, but seldom above a few feet in diameter, and always hollow within. When we consider that there are sulphur mines and many hot-springs impregnated with sulphureted hydrogen (hydro-sulphuric acid) near Móşul, all in the same rock, the effect of the evolution of gaseous matters immediately presents itself forcibly to the mind.

Abú Marri was now inhabited, but only by occupiers of tents; its *ķasr*, or barrack, was full of soldiers; and the residence, not of a Musellim, but of a *Zábit*, an inferior officer.

29th.—We advanced towards the eastern foot of the *Dólábíyah* hills of Abú Marri, on our left hand. After a journey of two hours and a half, we reached the ruins of a village called *Ķhatún 'Arabah-sí*;* the Abú Marri hills being still on our left hand $2\frac{1}{2}$ miles distant, the *Dólábíyah* hills to our right 3 miles. We had passed the ruins of *Dóláb†* or *Dólábíyah* 25 minutes before. On a plain where there were now only a few silver-leaved syngenesious plants, an ononis, and a robinia† with withered leaves, but as yet not a blade of grass or of bulbous-rooted flowers, a bright orange-coloured caterpillar had survived the sharp frost of the night. At 4h. 45m. from Abú Marri we passed *Selghât 'Arabah-sí*, another ruined village; and shortly afterwards, leaving the village of *Aĥmedát* $\frac{1}{2}$ a mile on our left hand, we continued along gypsum hills, from whence we first obtained a view of Móşul, its remarkable, tall and falling minaret bearing S. 85° E. We reached the *Sinjár* gate of that city, 7 hours from the time when we left Abú Marri; but while we were allowed to enter ourselves, our baggage was ordered round to the palace, in order to be examined. Moĥammed Páshá is remarkably strict, and allows no one to enter or go out of the town without his permission; and it is next to impossible for a *ra'yah*, or native, to obtain permission to leave it altogether: at the same time, correspondence with Constantinople is as much as possible impeded. By these means the population of the city is constantly on the increase, and it may probably boast of from 40 to 45,000 inhabitants. Handsome new barracks have been erected outside of the walls near the *Tigris*; and the Arabs can no longer come and rob with impunity at the very gates. The reverses of *Nizib* were not felt at this distance; and thus, while other Páshálik is in a state of temporary depression, Móşul is more populous and more orderly than ever.

* Lady's waggon.—En.

† Water-wheel.—Ed.

‡ This, with the *acacias* seen near *Ayás*, was probably some other leguminous plant, as neither of the genera named are indigenous in *Asia Minor*.—Ed.